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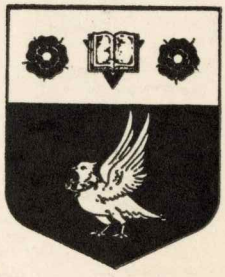

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Editorial Note

The Faculty Review has adopted a new editorial policy. Beginning with this issue the pages of the Review will be given over to a discussion of higher education — its principles and objectives, its techniques and methods. In the light of the fact that Sir George Williams College is, above all, a teaching institution, the editors believe that an exchange of opinion concerning the educational process should be of interest and value to members of the teaching staff. Indeed, it might well be argued that the staff of this College has a rich background of experience, particularly in the field of evening education for adults. Instructors are, therefore, invited to contribute whatever reports or observations they believe will stimulate thought and discussion.

Rev. R. Eric O'Connor is Professor of Mathematics, Loyola College, and Dean of the Thomas More Institute for Adult Education. He introduced Great Books Discussions into the program of the Institute and has acted as a discussion leader.

Some Values of Great Books Discussions for Adults

R. ERIC O'CONNOR, S.J.

A Great Books Discussion may look like this: Around a table are, say, twenty or twenty-five persons representing a good variety of prejudices, who have all read the book to be discussed. If it is their first meeting, the book will be "The Declaration of Independence"; if the second meeting, Plato's "Apology" and "Crito". Or the group may be further on and have read Thucydides' "The Peloponnesian War" or some plays of Aristophanes, or a few chapters of Aristotle's "Ethics", or Plutarch, or Augustine, or Aquinas, or Machiavelli, or Montaigne, or "Hamlet", or Locke, or Rousseau, or some of "The Federalist Papers", or Adam Smith, or Karl Marx. (This is practically the first year list.) Whichever book it is, the participants sit around the table with the common background of books previously read and discussed.

One of the two leaders opens the discussion with a lead question to a member of the group. "Mrs. Knox, would you ever break a law?" "Mr. Wilson, do you think Socrates deserved his fate?" "Miss Nadeau, can you really learn from someone else?" Soon the apparently trivial question has led to recalling the author's statements on some important issue. What abstractions and qualifications he makes, in order to have a precise issue and be able to make intelligent statements, are chiseled out by the discussion.

When the author's meaning and alleged reasons are sufficiently grasped, the group is led to their own opinions on the issue. They are pushed, in the thrust and parry of discussion to the reasons why their opinions are held, and to their implications. In all this the leaders themselves refrain from assertion. Questions addressed to them, they pass on to someone else. Their art is adroitly to help the members to explore their own opinions in the light of the book and in the heat and light of the discussion. I have never seen a Great Books Discussion proceed along a line expected by the leaders. If it followed a course predetermined by them, it would not have been a success.

The technique in which Great Books Leaders are trained, and whose spirit I have tried to indicate, actually leads to excellent discussion. The writings quickly become alive; an astounding relevance to today's problems appears; the cleverness or the wisdom of the whole author opens new vistas of insights; and in the course of suc-

ceeding discussions, practically all that has ever been thought about the issue comes sharply before the participants.

At first the books may be a bit hard to read, but by the reading **and** the discussion a person learns to read intelligently. Not only do the books become alive, but the readers do too. They become not merely exposed to the thoughts of others, nor merely stimulated to their own thoughts. They learn to search for the author's thought and to think it; and then to think their own thought.

Another advantage is an understanding of the thoughts of other times. Our histories of science and philosophy can be much like the markings in caves unearthed by archeologists, unless we actually share their questionings and their answering insights. I am not a classical scholar, but I had what is known as a good classical education, with courses in the history both of science and of philosophy. Socrates was a brave but nearly prehistoric figure until he came alive for me in Great Books Discussions.

Out of this comes another advantage which I take to be one of the chief purposes of all courses that are listed under "Humanities": an understanding of the commonness of our humanity, an intellectual experience of the similarity of men in their desires, searchings, misgivings, limitations and powers. I have called the experience intellectual, but it is more than this. It is an experience that is vital.

What about Great Books Discussions for University students? Certainly the technique of the Great Books leader (the Socratic method) can be fruitfully applied in university teaching. But two questions have been asked which seem to discourage the use of the discussion groups for university students. Are their opinions different enough to make a good discussion? Are they still in too great awe of their professors to have real opinions of their own? Basically they are the same question: Do we not, in our efforts to make students expert in any of the developed regions of thought, insist on a mass of complicated knowledge to their detriment as persons of responsible decision?

This problem struck me forcibly one day when a graduate in engineering seemed seriously disturbed by my statement that in certain branches of mathematics, 2 plus 2 is not always 4. He believed my statement — he was accustomed to believing statements he couldn't fully understand all through his engineering course — but at this juncture he realized that violence had perhaps been done to a pet phrase of his ("as clear as two and two") and became disturbed. Some time later the same remark made to an intelligent woman who had not attended university, elicited the serious but undisturbed reply: "They must mean a different thing by two and four from what I mean".

Great Books Discussions may be precisely what university students need; as they seem to be precisely what responsible citizens need.

It seems that most adults today are aware of responsibility in the choices they make, that is, in their decisions as to what they will

do. Few however realize that in accepting a proposition as true or false they are actually making a decision, and one into which a bit of their freedom goes. To me the greatest value of a Great Books Discussion lies in the way it forces persons to take responsibility for their assertions. We, for instance, express our rancour at injustices we have tasted, but we consider justice too vague to talk about; we don't like censorship of any kind, but we would like to wipe out ideas that do damage; we like the decisions of authority to be impartial, but we use whatever influence we can to win government help for our projects. Mostly our opinions are expressions of "how we feel", or the popular opinions of our milieu, or the conclusions of theories we have heard and "believe in". We have examined neither their premises nor their implications. Often we haven't even responsibly asserted whom we will believe.

Without responsible assertion the forces which well up into our moods and emotions, our passions and despairs, dominate us; with it these can be borne and be made to enrich us. Without responsible assertion the forces which well up into the life of our society dominate it; with it they too can be borne and made to enrich our culture. If we think of society as a fabric, its institutions are designs upon the fabric, but the fibre which holds it together is the responsibility of its individual persons. There is no internal substitute for this fibre. The only possible substitute is some form of rule by force.

Knowledge belongs to persons, not to books; freedom belongs to individuals, not to society. The Great Books raise the issues which are at the heart of all reasonable decisions. The Great Books Discussions force persons to make assertions on these issues and then to modify these assertions because of others that must be made. Persons making reasonable assertions are persons in the act of knowing. Persons making responsible assertions are persons exercising freedom.

What Do Our Students Read?

M. E. Waterston

Assistant Professor of English

"What do you read for pleasure?" One student answers proudly, "Anything heavy — e.g. philosophy books." Another jauntily admits, "Stories about sex!" But hundreds of their fellows reply, "Nothing."

The question is one of a series I have been asking all my classes since 1947. Day and Evening, Freshman and Senior classes have helped me study the reading habits of our students, by answering these questions: "(1) What do you read for information — a daily paper? a weekly magazine? technical journals? What do you consider the most informative book you have ever read? (2) What do you read for pleasure? for escape? What book did you enjoy most of all you have read? (3) What do you read for guidance: editorials? political platforms? "message" novels on religious or social themes? Name any book which has served you as a guide. (4) Do you know where you stand in religion? in politics? in economic philosophy? in aesthetics? Estimate the part reading has played in forming these opinions."

Now although I cannot offer scientific statistical summaries of the answers, I do believe the results of the questioning are of interest to all of us as educators. The answers reveal some startling facts about the students we work with — their interests, habits, and attitudes.

For instance, on "reading for information", the questionnaires show that slightly less than half our Freshmen read a daily paper ("read" being interpreted very liberally to include a general survey, three or four times a week.) Aside from the general problem of an uninformed student group, this raises a special question. The students' outcry against the bulk of assigned reading may possibly be justified by physical inability to cope with large amounts of reading. These Freshmen, unaccustomed to habitual skimming, have no reading speed other than that of methodical study. They have acquired no ability to glance swiftly through material. Failure to read a paper can be regarded as both symptom and proof of this loss. So reading lists which seem light compared to the heavy requirements of past periods, may actually represent a load which today's Freshmen cannot carry.

The habit of reading a daily paper, however, has become almost universal among senior students. Have they acquired a new skill? Or are those who survived the students who, as Freshmen, were already masters of the art of swift, habitual reading? Can we not make an organized effort to increase that skill, among **all** the first year

students—by individual aid, remedial courses, or whatever other means are possible?

Returning to the primary problem of the uninformed state of the student's mind, we may ask whether our Freshmen swallow their facts in weekly doses via the "newsmagazine". No. In 1950, in a first year group of 88, for instance, 23 said they never read any weekly magazine. That same year in a senior class of 77, 71 listed at least one weekly as habitual reading. Besides the growing proportion of readership, these groups illustrated another difference between freshmen and upper classmen. In first year, **Life** (picture coverage of news) was listed 41 times, **Time** (verbal coverage) 19 times. Other references included **Star Weekly** 2, **Saturday Evening Post** 5. Senior students listed **Time** 46 times, **Life** 18 times, **Post** 16, **Saturday Night** 12, **Standard** 4. More print, less pictures; more range of reading among senior students. We wonder whether this represents a change in habits during the college course, or whether the difference foreshadows the coming of a new generation. I notice that the groups most marked in divergence of choice, and in tendency to choose unillustrated weeklies, were the Veteran groups of a few years back, and the Evening Division people. Lately my senior students have been listing **Life** and **Weekend** more consistently, as though marking the completion of a general change in habit among more recent products of the High Schools. Why? Do the schools now rely that much more heavily on movies, radio and other nonliterary media? If so, should we attempt to follow suit, or should we try to combat the change?

As to the books listed as "most informative ever read", the list is long. In a typical group of upper-classmen, 24% listed a college text such as Lower, **Colony to Nation,** or Mavor, **General Biology;** 22% listed some semi-popular book of information such as Van Loon, **Lives,** or Durant, **Story of Philosophy;** 8% listed High School texts; 10% listed standard references such as the Encyclopedia; 10% specialist technical books such as Toolman, **Bleaching, Dyeing, and Finishing of Textile Fibre;** 10% books of exposé such as **Russia Without Illusion;** and 16% listed such works of fiction as **The Robe, The Moneyman, Two Solitudes.**

In the Evening Division figures run this way: High School texts, 4%, College texts, 19% standard reference, 11%, semi-popular general information 30%, fiction 17%; and two new types appear; discussion of current events, such as **Crusade in Europe,** 4%, hortative "how-to" books, such as **How to Win Friends and Influence People,** or **How to Double Your Vocabulary,** 15%.

These percentages represent proportions of all the books named. But here is the sad and startling part: in that Day Division group, 41.3% could not think of **any** book as outstanding in informative value; in the Evening Division 48.9% left a blank. We might hazard a charitable guess that some could not choose one title from a wealth of memories. More coldly, we may want to revamp our reading lists, both of texts and of suggested supplements for more impressive material. Remember the heavy choice of "fiction" — sugar-coated

information, easily digested and pleasantly remembered.

Perhaps most of us could guess the facts presented by the answers to the "Informative" section of the questionnaire: the general lack of a habit of swift reading, the wide readiness to accept narrow interpretations of news, the common failure to make a memorable response to information presented in print. The second batch of answers would be harder to predict. These concern reading for pleasure — for escape, for relaxation, for imaginative penetration into other worlds, other times, other points of view.

Here again, the most startling fact is the failure to list **any** book remembered as particularly enjoyable, a failure running as high as 36% in the Evening Division. Of the books listed in Day Division upper classes, 28% were children's stories, 36% recent best sellers, 14% standard adventure stories (such as **The Sea Wolf** or **Bulldog Drummond**). 8% classics (such as **War and Peace**), 6% humour, 8% miscellaneous non-fiction. In Evening Division the proportion runs: children's stories (including **The Wizard of Oz, Anne of Green Gables,** etc.) 42%, recent best sellers 24%, miscellaneous (including **The Search for Prehistoric Man** and **Animal Farm**) 8%, classics 14%, humour 8%, adventure 4%.

The highlights in reading memories, it seems, were not the brightest of beacons. As for general habitual reading for entertainment most students excuse themselves with "No time." Those who find time turn mainly to pocket book offerings — that is, they choose their reading by convenience in size and price. The taste for Erle Stanley Gardner, for Thorne Smith, and for Westerns runs strong. Few Freshmen pay homage to detective stories, but the taste for murder sets in strongly around this year! Mention of comics disappears as freshmen progress to upper years. In first year very little deviation in choice appears.

To me this adds up to the story of stereotyped minds — students whose narrow range of experience has received no vicarious broadening. Although less serious in Evening Division, this general situation presents us with a student group lacking in imagination, in understanding of traditions other than contemporary, stiffened in family and neighbourhood attitudes. Our students pride themselves on being broadminded; but a breadth which excludes any sympathy with romance, with fantasy, with poetry, with any brand of humour subtler than the comic strips — such a "breadth" surely is damned by its shallowness.

As to reading not primarily for information nor for pleasure but for guidance, 90.9% upper year Day students, 90.1% Evening students of all years, 83.6% Freshmen in Day Division could not remember any book as having wielded guidance over their ethical, religious, aesthetic or political positions. Of that small group who **did** list a "guidance" book, 9 out of a total of 524 students mentioned the Bible, and of those, one was careful to specify that this influence was as "a philosophical text book in Jewish school". Consider the implications of the other books mentioned as exerting attitude

influence: **The Robe, Green Light, Keys of the Kingdom, Razor's Edge; Communist Manifesto, Freedom Road,** Paine's **Common Sense, The Grapes of Wrath; Sister Carrie, King's-blood Royal, Fountain-head; The Basic Writings** of Sigmund Freud, **The Story of Philosophy,** Osler's **Way of Life.**

Does the poverty of titles simply indicate the difficulty of isolating in memory the sources of attitudes? Or does it mean that deeply responsive reading has ceased to be part of the mores of adolescence? The lack of enthusiasm, of crusading zeal in the 17-year-olds now in our freshman classes — that apathy which seems to characterize the whole generation — may stem partly from world conditions; but, I am convinced, it comes partly from lack of experience and particularly from lack of the spiritual awakening which has always been the boon of books, read in solitude, with unashamed eager response, and with fiery absorption and acceptance. **Zealous** reading is disappearing, even more rapidly than **curious** reading.

Can we as teachers offer a substitute? Certainly no other powerful replacement source has appeared (as in the emergence of news-casts and news-reels as a substitute for news reading). How often do young people listen to serious radio talks? how often do they shadow a Friday night movie-date by taking in a "message" picture? Nor does the home often act as a medium for propagating religious, economic, or political faith. Fear of a "heavy father" act and break down of the home as a focus for religious and recreational life have thrown the youngsters on their own, spiritually speaking.

As to the **need** for guidance, I offer this summary of answers to the final section of the questionnaire, on attitudes, religious, political, economic, and aesthetic, and the part played by reading in the development of those attitudes. Students professed uncertainty as to their beliefs in this pattern:

All Yrs. Eve. %	1st Yr. Day %	2nd Yr. Day %	3rd Yr. Day %	4th Yr. Day %	
23.5	34	33	9	18	unsure of religious beliefs
34.	43	29	27	0	unsure of political beliefs
17	49	37	54	9	unsure of economic beliefs
5	29	9	18	9	unsure of aesthetic beliefs
15	24	8	2	4	claim reading played a large part in forming attitudes

The last line of the chart emphasizes some interesting correlations. Freshmen, least sure of themselves, still recognize their school debt to reading; in second year, although matters of taste become clearer and less disturbing (most of them rank themselves as "modern" in aesthetic position) the debt to reading takes a sharp drop. By third year the debt is almost non-existent; religious positions stabilize (most claim an "agnostic" position) but economic beliefs become disturbed. Fourth year brings greater certainties, but our seniors list "lectures and discussions" as a much more important source of belief than reading. Note that confusion regarding economic faith (free enterprise,

controlled economy, etc.) is much slighter in evening classes than in day; note also the larger recognition here of a debt to reading.

Accepting the students' evaluation of the source of their opinions, we must ask whether we are providing a worthwhile substitute for reading. How far have we actually changed our techniques in conformity with new needs? For years, educators have assumed that the lean remnant of confirmed readers — readers from habit, readers for fun — had snuggled into the sheltering arms of the colleges. Now it seems that the arms are clutching air.

Is there hope for a return to the fold? Is there any urgency in that hope in this day of reading-substitutes? If the hope is vain, what changes must we, as teachers, make in our conception of the present day college student, his attitudes, and his aptitudes?

An Experiment in Teaching Chemistry

J. R. Ufford

Assistant Professor of Chemistry

The usual course in Industrial Chemistry very often consists of a review and re-arrangement of material which the student has had presented to him in previous courses. The lectures deal with the history of the process being discussed, the basic chemistry involved and a description of the physical equipment used in the plant. Sometimes an attempt is made to show the place of the industry in the economy of the nation by quoting production data and costs for various periods of time.

Recently a different technique was tried in teaching a course such as this. The idea was discussed with the students beforehand as the method required their cooperation. Briefly the method was this: A number of industries were selected as being the major industries to be discussed. Each student then selected an industry to work upon as his own field. Then he prepared a report on this for presentation to the class as a whole.

The report was required to contain the following information: a brief history of the process, the basic chemistry of the industry, a description of the physical equipment of the plant and its operation. In addition to this usual material the following additional data were also required: Canadian production, costs, uses of the materials, processes which are competitive with the one under discussion, the raw materials used, the sources of these and possible substitutes or alternative sources, and finally, the position of the industry in the Canadian economy.

After the report was presented to the class the group as a whole discussed the industry. Grades were based on the material in the student's report and on his participation in class discussions. No examination was given.

This method of presenting such a course has some advantages and disadvantages which it might be well to point out. The method cannot be used for large classes since each student must have a chance to present his report and time must be left for discussion. The oral presentation of the report involves some difficulty in the case of individuals who do not read aloud well or who do not speak clearly.

In some cases where a report is poorly prepared the class loses interest in the topic under discussion. The student learns a great deal about one particular industry and not too much about the others. This is not the case, however, if the student prepares himself well for discussion of other reports.

On the more positive side this technique has some advantages among which are: The student prepares a report, on his own initiative, on a subject with which he has little familiarity. This involves some library research and a search for production data. (It might be interesting to note here that the students received excellent cooperation from various manufacturers and government departments in obtaining information.) The group as a whole began to realize the importance of the various industries to Canada by seeing Canadian statistics rather than the American one which are usually in text-books. During the discussions the students cleared up any difficulties arising from the report and also brought out any points which had been omitted. Various side issues which were not of direct concern to the industries but which are important to production, such as transportation and power, use of by-products, waste control, etc., arose during discussion.

At the close of the course the students were asked to submit their comments and suggestions on the method. These brought out a few ideas which might be used if the method is repeated. The report could be discussed by the student and instructor before presentation to the class. The papers could be placed in the library for examination by the class at any time after presentation. The students appeared to prefer this method of instruction by a ratio of about four to one.

The following three articles constitute a Symposium on Objectives in College Teaching.

I

James Winfred Bridges:
Senior Professor of the Social Sciences Division

My Objectives as a College Teacher

An adequate exposition of my objectives as a college teacher would involve a philosophy of education and a philosophy of life or a "confession of faith," which obviously I cannot present in the space allotted to me for this article. I shall, therefore, confine myself to a bald and relatively undefended statement of "what I hope to accomplish in teaching my particular subject" — or subjects, for I have courses in anthropology as well as psychology. In addition to these specific objectives I wish to refer also to certain more general aims, which may perhaps be indirect and immeasurable products of my contact with students.

As to the **specific objectives** I must state frankly that, being a thorough-going empiricist and eclectic, I want my students to learn **facts,** scores and hundreds of facts, about the evolution of man, the evolution of culture, the mechanism of behavior, the nature of human experience, the learning process, and so on. And I do not care how they learn the facts. In my opinion a clear distinction between rote and logical learning cannot be made. Every person learns with all the logic or all the meaning at his disposal. If he has little "apperceptive mass," his learning must perforce be relatively mechanical. Facts are the foundation of knowledge and the necessary basis of thought. It is literally impossibly to think about nothing.

However, thinking about the facts of experience can, no doubt, be improved. To this end the student ought to learn something about **logical principles** in order to recognize the possible fallacies in drawing conclusions from the facts or in generalizing from limited data. He should also learn about **scientific methodology,** particularly about the procedures adopted in discovering the facts under consideration. He might thus come to realize that so-called facts may be concepts or figments of the imagination or illusions of observation, and that flaws and errors can occur even in scientific experimentation.

In psychology and anthropology, as in all sciences, there are also points of view, **theories** and hypothetical constructs, presumably to explain the facts, though often enough they merely express the personal idiosyncrasies of their inventor. These I try to expound in an unbiased way. I want my students to understand them, not necessarily to believe them. This, I think, is one distinction between educa-

tion and propaganda, — granted the distinction is not at all clear cut. Belief is a matter for mature and considered judgment, and it is not necessary to decide on many such theoretical issues. A little scientific agnosticism is surely a humbler and more realistic state of mind.

Stated from another point of view my specific aims are twofold. First I want my students to acquire an **understanding** of people, the societies in which they group themselves, the culture which they carry, the contemporary interaction among all these complex variables, and their long historical background. And, secondly, I wish them to get some **insight** into their own experience and behaviour. This may be achieved through psychological knowledge and constructive self analysis (as distinguished from morbid introspection). If one can learn to question the nature and origin of his own fears, hostilities and prejudices, these may lose some of their sharpness, even if he cannot find a satisfactory solution to his problems.

I believe that the achievement of these relatively specific objectives may be facilitated by the following qualifications and procedures of the teacher: (1) Knowledge of subject matter, and willingness to admit ignorance of unknown points. To foster the illusion of teacher omniscience gives the student a wrong idea of the scope and tentative nature of science. (2) Broad, tolerant and eclectic attitudes towards scientific theories. (3) Organization of subject matter to assist the student in his integration and in logical learning. (4) Simplification of subject, insofar as this is possible without distortion of facts. Many teachers adopt an opposite procedure and make the simplest subject relatively unintelligible. (5) Relating the subject matter to life, either by references in lectures, by contact with actual social situations, or by fictional presentation from literary sources. (6) Recognition of individual differences not only by the teacher but by the college administration. In my opinion there is no sillier practice in college education than the "goose step" which compels every student to go at the same pace — four years within the sacred walls. It should be obvious that one person can do in three years or less what another can hardly accomplish in five or more.

I also have **general objectives** pertaining to the development of human personality. Here the results cannot be measured by examinations. They are probably qualitative and admittedly vague. We teachers should, however, give them some consideration. For example, a "conditional pass" could be weighted one way or another by such **felt** achievement. This is only an admission that we are not infallible, and that knowledge cannot be adequately measured — much less personality traits.

For the most part I take the view that the **values and attitudes** here considered are not directly taught. They are **caught** in the environment to which the individual is exposed. The growing child adopts the values of his parents, but if he is forced to accept them he will probably react against them. The same is, I think, true of college students. The teacher cannot very well hide his attitudes and he cannot prevent his students from imitating them. Like the parent, **he**

must be what he wants his students to be. It is useless to tell them one thing and be another. If he wants his students to adopt the values of a democratic society he must have them himself. In this connection it should be recognized that the student already has a "value-attitude system" when he enters college. This may constitute a resistance to the acceptance of other attitudes and even to the acquisition of knowledge. Failure to grasp an idea or understand a theory is not always due to stupidity of an intellectual nature. How to overcome this "student resistance" is an unsolved and challenging problem in education.

Some of the values or attitudes which I try to uphold and hope my students will adopt are the following: (1) Self-reliance, a foundation stone of any properly functioning "government by the people." By this I mean strength of character, ability to stand on one's own feet; and independence of judgement, ability to make one's own decisions. (2) Sense of responsibility, that is, acceptance of the duties as well as the rights of citizenship, consideration of the social implications of behaviour, and willingness to accept the full consequences of one's own decisions and actions. This is only being a "person" in the legal sense of the term. (3) Tolerance, without which no society can long endure. The free man must recognize the freedom of others — that every person has the right to his own opinions, his own delusions, his own habits, so long as they do not interfere with the life and freedom of others. Here he must draw the line. Democracy cannot give freedom to those who advocate any kind of slavery. It would thereby merely sign its own death warrant. This so-called "dilemma of democracy" is no dilemma at all, for it is only a weak-kneed democrat who would go so far as to tolerate intolerance. (4) Cooperation, working together to achieve social goals in a free association of free men. (5) Respect for truth, scientific realism. Only when we see the world and man objectively and realistically can we have a stable and lasting social order.

Finally, all knowledge, attitudes and values must be organized into some kind of meaningful unity. This integration, like composition in art, is a **sine qua non** of personality, variously described as unity in variety, order in complexity, or one in many. And now I come to an important point. **This integration is the student's task.** If integration is the crux of personality, if personality is learned, and if learning is best achieved by doing, then the student must work out his own salvation by organizing his material and experience into broader and richer patterns until he achieves, maybe, a world view, an effective harmony (emotional stability) and a congruent "style of life."

Personally I have little concern when a student says he is all confused and disturbed. That is a common if not necessary stage in the educative process. One cannot impart a new idea without disturbing the integration that has already been accomplished. Indeed, if there were no disturbance, there was probably no integration to disturb. But a new and better integration will ordinarily follow. This is the "gadfly theory" of education that goes back to Socrates.

Now, I do not mean that the teacher has nothing to do in this

respect. But if he solves all the problems, if he makes the integration too easy, the student remains a weakling, always dependent upon his teacher, or some other mother substitute, to guide and direct him. The teacher's task, like that of a good mother, it to emancipate his pupil, to release him from the academic apron string, to give him his independence so that he can go forth and face reality alone without further need for pedagogical breast-feeding. This weaning process may be as hard for the teacher as for the mother, but nevertheless necessary to the "growth of persons."

On the other hand, the integration may be too difficult for the mental calibre of the student, so that he remains confused, incoherent, discursive, and perhaps in a constant state of mental conflict and anxiety. Here the teacher may point the way or, better, clarify the situation without solving the entire problem. A middle ground must be sought between too easy and too difficult a task — just as in the home or in the nursery.

The result of all this learning and integrating will be, let us hope, a unique personality, a significant whole, meaningful in its social setting. Each personality differs from every other not only in content but in pattern of organization. I think we should aim at uniqueness rather than attempt to mould all people in the same academic mint, symbolized by the old school tie and the blazer. After all uniqueness is a criterion of worth in art. Why not in personality?

A personality so developed will also have other aesthetic characteristics, such as balance and proportion. In this connection it is interesting to note that according to the mental hygienists the balanced person is also the mentally healthy person, and balance pertains not only to the intellect but also to the social, emotional and physical needs of the individual, — that is to say it involves the whole personality. Thus at one stroke we achieve, may we hope, three important goals: first, an aesthetic personality, pleasing to others, and satisfying to its creator (that is, to him who achieved it); secondly, mental health; and thirdly, a personality trained to play its role as a free and self-reliant unit in a cooperative and democratic society.

II

Dorothy M. Sokolyk

Lecturer in English and Supervisor of the English 101 Program

My Objectives in Teaching Communication Through Language

In the early days of human history the "glamorous" person in the community was the magician, versed in the witchcraft of language, who through his knowledge of the power of words commanded the

occult forces of nature, and because of this power, the fearful respect of the tribe. The word "glamour", a dissimilated variation of the word "grammar", is seldom associated today, however, with a course in Communications or with those who teach about language.

In teaching Communication Through Language my objectives are not to command the forces of nature, nor the fearful respect of my students, but rather to replace remnants of the magical attitude toward language (still very prevalent in our society) with a more scientific, reasonable one, and to stimulate interest and curiosity about language as a meaningful activity carried on by people. More specifically, I wish to create an awareness of the nature and power of language, and to guide the student in the effective use and interpretation of English.

As a communicator in what has been called the "verbal age" the student must be provided with means for effective command and control of the medium which is the continuous accompaniment of nearly all human activities—"language—the indispensable mechanism of human life . . . the greatest of human achievements." The complexities of our social order daily present adequate proof of the desperate and urgent need for more reliable control and understanding of the communication process, particularly in countries where democratic procedures are desired and upheld. Realization of the important function of language in communal, national, and world-wide relationships offers serious challenge to those concerned with helping students make adjustments to modern living. If it is agreed that the function of the educational institution is to prepare the student for full and satisfactory living, then it follows incontrovertibly that one of the chief responsibilities of such an institution is to make the student significantly aware of the all-pervasive and powerful effects of language on human behaviour, and to help him achieve effective language control and expression.

Because language is taken as much for granted as the air we breathe, and because familiarity breeds, if not contempt, indifference, my preliminary objective is to convince the student of the power of language and the important role communication plays in everyday living. I want him to become aware that **somebody's** words are regulating his most casual as well as his most consequential thoughts and actions. (A philosopher, a girl, a government official, a street-car conductor.). Early in the course I introduce the concept of the two-way process of communication — the dual function of the individual as a sender and receiver in a society of cooperative nervous systems. (When an individual is uncooperative, communication is impeded or prevented.) Unless communication is understood as an experience and a process between people and language, effecting personal adjustments and human relationships, there is little incentive for the student to learn the skills, techniques and principles involved in becoming an efficient communicator. My main objectives are then: To teach the student (as a speaker and writer) to transmit clearly, precisely and effectively his ideas and feelings, and (as a listener and reader) to evaluate critically and impartially ideas and feelings ex-

pressed in oral and written language.

I have what might be called three "immediate" objectives. Following the orientation to the importance of comunication in human society, I introduce my students to the study of Diction — the key to effective communication. Among the topics discussed are appropriate levels of usage and selection of words for specific contexts. The importance of commanding a large vocabulary and ways of developing one are discussed. A study of words as symbols introduces new considerations of the symbolic nature of language, the confusions which arise in mistaking the word for the thing, the misunderstandings caused by abstractions. The dangers of semantic illiteracy are pointed out. If people are unable to perceive the meaning of what they hear and read, they are in a perilous state of equilibrium and inevitably are victims of commercial and literary fraud. According to C. W. Morris ". . . Sharing a language with other persons provides the subtlest and most powerful of all tools for controlling the behaviour of these other persons to one's advantage — for storing up rivalries, advancing one's own goals, exploiting others."

My second immediate objective is to give new significance to the study and mastery of the conventions — grammar, spelling mechanics, sentence structure, paragraphs and other important aspects of good composition. If the student realizes the important symbolic function of these refinements, learning the conventions of language takes on new significance. Consider for a moment the pitfalls of punctuation. "Bishop goes to Paris with his wife!" Does the exclamation point not create more interest than a full stop would have done? Or consider the following statement. "You must never think you are in this world solely for the purpose of making money." This was reported: "You must never think. You are in this world solely for the purpose of making money." Knowledge and mastery of the conventions is stressed as an essential foundation for the educated man. Violation or failure to use the conventions, which have developed and exist to faciliate the communication process, results in partial or complete breakdown between communicators. (There has been a great deal of heart-searching among the members of faculties in our schools of higher learning as to the reasons for the lack of knowledge of the conventions of the English Language in the undergraduate body. I am directly concerned with this problem, but as I am setting forth my **objectives** in teaching the conventions of language, I feel it irrelevant to discuss the question at this time.)

My third immediate objective is to develop new principles, techniques and skills that can be applied to language as it is daily spoken, heard, read, or written.

I feel it important to sharpen an awareness of the use and purpose of informative and affective communication, to inform the students of the dangers, hazards and mis-applications of both forms. They learn that informative communication is concerned primarily with factual, verifiable information, instrumental in getting done the work necessary in life, and that affective communication is concerned primarily with creating or expressing emotional reaction and response,

used to tell more about what life feels like in the living. With propagandists constantly clamouring for attention, the need to provide the student with some means of recognizing and evaluating the factual and emotional content of the verbal deluge which pours upon him would seem essential. Too easily can modern man become the pawn of the advertiser or the dictator.

I teach some elementary principles of the laws of thought — some fundamentals in straight thinking — to provide the students with some techniques for critical thinking. Learning how to analyse an argument, how to distinguish between fact and opinion, are but a few of the techniques discussed that have application in basic language control and evaluation. There is surely a desperate need for men who can exercise intelligent choice, who prize accurate information above hearsay, and who have ability to "think straight."

Such skills as how to use the dictionary, how to improve reading and study habits, how to use the library, are introduced early in the course to help the student with his immediate problems of communication at college.

Studies are made of specific modes of communication — letters, book reports, short stories, feature articles and the research paper — to give adequate opportunity for practice and application of the many phases of the course.

At the completion of the course I should like to think that the student leaves with a new understanding of the persuasive effects of language on living, with a knowledge of the principles involved in effective communication and with sufficient skills and techniques to express his thoughts and feelings or to evaluate the verbal Niagara. However, inasmuch as I have renounced association with magicians and witchcraft as well as claims to glamour, this may seem like fond hope: but—

> "Hope springs eternal in the human breast:
> Man never is, but always to be blest . . ."

III

Samuel Madras:
Senior Professor of the Natural Sciences Division

What I Hope to Accomplish in the Teaching of Science

Some important objectives for which I aim are:—

(1) To indicate the place of science in society.

(2) To explain the scientific method.

(3) To impart certain principles, facts and skills that will intro-

duce the student to the subject and enable him to pursue it further. In advanced courses, the emphasis shifts to the development of the student's initiative and originality so as to prepare him to meet an unusual problem with competence.

The influence of science is well known to the student even before he comes to college, being impressed upon him by the press in a sensational manner. The aim of a science course must be higher than merely to reiterate that science has harnessed untold power, created vast industries, increased the harvest, discovered new drugs, reduced distance and so forth. Here is an opportunity to show the student **how** the topic he is studying has been applied. Thus Faraday's Law of Electromagnetic Induction is not only an important principle of physics — it is a milestone in the development of civilization as we know it, for it gave us electrification. Haber's synthesis of ammonia is more than an important reaction in chemistry — it provides synthetic fertiliser which makes possible large scale scientific agriculture. A scientific principle becomes more relevant and therefore more interesting if its effect on the live present can be indicated.

While the student is receptive to the achievements of science, he is almost completely unaware of the method by which science progresses and is reluctant to accept the discipline which theoretical and mathematical science demands in its theories, concepts and calculations.

To define the scientific method as controlled observation, systematic collection of data, logical postulation of hypothesis and experimental verification, may not be difficult; but to explain the scientific method by showing how science solves its problems becomes one of the most difficult-to-attain objectives of science education. For example, chemistry and physics offer a picture of the composition of matter consisting of molecules, atoms, ions, electrons, protons and neutrons. No one will ever see these particles even under the strongest microscope. An instructor cannot "demonstrate" them on his desk before the class. Yet, they are the chief characters of his drama. Without them he can explain nothing in chemistry, electricity, atomic physics and radioactivity. He must offer proof not only of their existence but of their weight, size, number, architecture, speed, electrical charge and general behavior, all as witnessed by the eyes of the mind, not of the body, through the medium of mathematics.

It has been my experience that an historical account of the problem, the critical experiments, the results — briefly, the **modus operandi** of the scientific method in each instance — is the most satisfactory exposition of such abstract scientific concepts. The controversies and even the discarded theories of the past whose errors are still instructive should be included, especially in advanced classes. Good examples of such material are the evolution of the atomic theory, the concept of valence and the concept of light. Dalton's atomic theory began as a speculation around 1810, and for the next 50 years was the subject of an international debate in scientific circles, with almost all the leading theorists including Dalton himself supporting the wrong side — and for good reason.

The third objective is the presentation of the principles, facts and skills of the subject. These constitute the **pièces de résistance** of the course, providing the material for lecture and examination. This material must be carefully organized so that the bond between student and instructor strengthens as an integrated picture of the subject emerges in perspective. If high standards are exacted from the student, clarity in teaching is vital. The maxim that "If a thing is worth doing, it is worth doing well" applies to both student and instructor.

Principles should be derived and illustrated with applications. Problem-solving in physics and chemistry should be taught on the premise that problems illustrate the principles of the subject. Common difficulty with the mathematics of science which students experience arises from their belief that problems are riddles or brain-twisters at which they are not very good. To learn that problems can and must be solved by the applications of the principles of the subject — indeed, the problems have no other **raison d'être** than to teach those principles — that is an education in itself for the majority of first-year science students.

The student should acquire certain skills in the laboratory and with his slide rule. He should be able to follow printed instructions. He should be more thorough, reliable, honest and cautious and less naive as result of his science education.

In High School, my English teacher used to say despondently: "You can lead a horse to water but you can't make him drink". As time passes. I have come to realize that the teacher's job is not to lead the victim to water, nor to force him to drink. It is to make him thirsty.

Soirées for Evening Students

David Schwartz

Lecturer in Political Science

The Evening College provides little opportunity for the student to enjoy the society of his classmates. The lecture schedule is a full one, beginning as it does during the normal supper hour and extending until well past ten o'clock, thus not allowing for any social exchange between students. And with, for most individuals, the next work day so close at hand, the time available after lectures and before a normal bedtime is, indeed, wanting for introductions. Thus, the academic semester runs on with the student racing to class and from there to home.

In the belief that both the student and his work would benefit from a meeting on a purely social level I suggest to my classes early in the term that an evening of their choosing be set aside to get to know one another in an atmosphere free from the academic constraints.

I make it clear that I am to play no part in the arrangements, save in the measure that my advice, if requested, may be of help; although I hint that I shall be disappointed if, along with Mrs. Schwartz, I am not invited to attend the soirée. I hasten to add that to date we have attended all parties.

The class is asked on a show of hands to indicate its interest in such an endeavour and the motion is successfully carried. Certain students volunteer to form a mixed committee to look into the matters of meeting-place, entertainment and refreshments for the proposed evening. The next class night the spokesman for the committee reports on the committee's findings and the group questions the advisability of the selection and other details, the most significant discussion at this stage being how much can be had for how little. All differences are settled by a majority vote. The question of refreshments for some resolves itself into an inquiry whether beer or some 'man of distinction's' choice will be available, with glances in my direction for approval. Nearly all parties have had some alcoholic beverage and in no case has there been an abuse.

The selection of the meeting place poses some difficulties since the hotel salons are comparatively expensive and to ensure large attendance the cost of the evening should be kept as low as possible. Never at any time has it exceeded the two dollar mark per person even when held in a hotel, and this price includes refreshments and a salon with piano. Where a student can offer the use of his or her

home the expense of the evening is considerably reduced.

In numbers, the classes have ranged from twenty-five to sixty students with an attendance for the evening usually of not less than 70% of the total enrollment

I may say that where the group has not exceeded twenty my wife and I have invited the class for an evening with us. This has always been most enjoyable and I believe equally so for the class. The matter of dishes and the cleaning up after is simplified by the purchase of paper dishes and cups. Beverages on these occasions extend to tea, coffee and milk.

The entertainment includes dancing with music supplied by radio and record player and, of course, a sing-song around a piano which is an excellent way of creating a friendly exchange amongst the group. A recent meeting ended up in barn dancing — the barn dance poses no social barriers. There are, of course, innumerable other amusements which the students themselves are quick to suggest and the evening moves along pleasantly and happily.

The students normally bring their own partners and the married student of course brings his partner. I have been told by many a wife that the evening has been the only opportunity since her husband's attendance at Sir George of meeting his classmates and instructor. Interestingly, married students are always the first to favour such an evening and their attendance proves this. The opportunity to include one's spouse is a pleasant and different event in the college schedule. Students are encouraged to come whether accompanied or not since the prime purpose is to get to know one's class mates. Again my experience has been that students without partners have attended unhesitatingly.

I am convinced that there is much benefit to be derived from these social meetings. The student looks forward to seeing again his classmates with whom he has shared a pleasant evening. The instructor has had an opportunity of talking to and indicating his interest in the student out of the environment of the classroom (with the result frequently that the latter feels freer to consult the instructor about his problems of the classroom). In the case of the married student his partner has been brought into the academic circle and, even if only slightly, the result is healthy for both. Above all, the students are introduced to one another's personalities and to the attendant variety of backgrounds which are part of the social milieu in which they live.